

REMARKS

Claims 1-17 are pending in this application, of which claims 4-11 have been withdrawn from consideration pursuant to the provisions of 37 C.F.R. § 1.142(b).

In this Amendment, claims 1, 12, and 13 have been amended. Care has been exercised to avoid the introduction of new matter. Specifically, support for the amendments to claims 1 and 12 can be found in, for example, the first full paragraph on page 3, and the paragraph bridging pages 12 and 13, of the specification, and Figs. 1-4.

Claims 1-3 and 12-17 are now active for examination, of which claims 1 and 12 are independent. A Request for Continued Examination is filed concurrently with this Amendment.

Claim Rejections – 35 U.S.C. 103

Claims 1-3 and 12-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Blumenau et al. (U.S. Patent No. 6,260,120, hereinafter “Blumenau”) in view of McClannahan (U.S. Patent No. 6,438,670, hereinafter “McClannahan”), and further in view of Wang et al. (U.S. Patent No. 6,834,326, hereinafter “Wang”).

In response to Applicants’ reply dated May 20, 2009, the Examiner asserted as follows (paragraph 4 on page 2 of the Office Action):

The applicant concedes that the prior art teaches the limitation "divides a series [of] cryptographic processing..." cited by the Examiner stated as "a key generation, encryption, decryption, inputting data to be encrypted, outputting the decrypted data, and any other intermediary steps in the cryptographic processing from start to end are considered as plurality of procedures" (see page 3 of the Office Action).

See also the paragraph bridging pages 4 and 5 of the Office Action referring to column 38, lines 1-10 and 53-67; and column 40, lines 20-34, of Blumenau.

However, Applicants submit that Blumenau, McClannahan, and Wang, individually or in combination, do not disclose or suggest a host device including all the limitations recited in independent claim 1, as amended, and a method for executing a series of cryptographic processing including all the limitations recited in independent claim 12, as amended.

With respect to independent claim 1, the applied combination of the references does not teach, among other things, the following limitations recited in the claim:

a second encryption unit configured to perform a host-device side process of a series of cryptographic processing for encrypting data to be secured; and

a controller which

divides the series of cryptographic processing into a plurality of procedures, and divides the plurality of procedures into procedures to be executed in the first encryption unit and procedures to be executed in the second encryption unit, and

issues to the storage device a command for controlling the first encryption unit to execute a procedure to be executed in the first encryption unit out of the procedures,

wherein the controller obtains information for estimating time necessary to execute the command from the storage device prior to the issuance of the command, sets a wait time for the command based on the obtained information, issues the command to the storage device via a bus electrically connecting the host device and the storage device, releases the bus for another command, and waits the time set for the command before it issues a command for the next procedure to the storage device, in order to have the next procedure executed by the first encryption unit.

In this Amendment, claim 1 has been amended to clarify that the series of cryptographic processing are divided into a plurality of procedures, and the plurality of procedures are further divided into procedures to be executed in the first encryption unit provided to the removable storage device and procedures to be executed in the second encryption unit of the host device. Accordingly, it is apparent that the series of cryptographic processing are distributed to the host device and the removable storage device.

As mentioned above, the Examiner, referring to column 38, lines 1-10 and 53-67; and column 40, lines 20-34, of Blumenau, asserted that a key generation, encryption, decryption, inputting data to be encrypted, outputting the decrypted data, and any other intermediary steps in the cryptographic processing from start to end are considered as plurality of procedures. However, the paragraphs of Blumenau cited by the Examiner only discuss procedures performed by a host controller. Blumenau does not teach, and the Examiner did not indicate where Blumenau teaches, that the series of cryptographic processing are divided into the plurality of procedures which are further divided into procedures for the host device (second encryption unit) and procedures for the removable storage device (first encryption unit).

McClannahan and Wang do not teach such a division of procedures, and do not cure the deficiencies of Blumenau even if the combination of the three references is assumed proper for the sake of this response.

Based on the foregoing, Blumenau, McClannahan, and Wang, individually or in combination, do not disclose or suggest a host device including all the limitations recited in independent claim 1, as amended. The above discussion is applicable to independent claim 12 at least because the claim includes limitations similar to the above-discussed limitations of independent claim 1. Dependent claims 2, 3, and 13-17 are also patentably distinguishable over Blumenau, McClannahan, and Wang at least because these claims respectively include all the limitations recited in independent claims 1 and 12. Applicants, therefore, respectfully solicit withdrawal of the rejection of claims 1-3 and 12-17 and favorable consideration thereof.

Conclusion

In view of the above remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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